

Ironworker

Ironworkers are versatile, multistation metal fabricating machines that offer component tooling options to perform punching, shearing, notching-coping, and sometimes bending operations. The workstations can work singly or simultaneously and all tooling moves vertically. Ironworkers are normally powered hydraulically.

Hazard

Severe crushing injuries or amputations can occur if an operator makes contact with any of the pinch or shear points this machine provides.

Flying or ejected parts from either the stock or the tooling can strike operators and other workers in the area. Furthermore, punches are hardened and will not bend as they collide with dies. If a punch is out of alignment, it is more likely to flake or even explode, causing serious harm to the operator.

Unprotected foot pedals can also introduce the possibility of accidental cycling.

Solution

Guard all pinch and shear points with fixed or adjustable guarding. Guards should be adjusted down to within 1/4-inch from the top of the material to the bottom of the guard (or stripper when punching). Most newer machines are equipped with adjustable restrictors that surround the material in-going areas and should allow just enough clearance for the material to enter.

Beware of machines with automatic urethane hold-downs. These hold-downs, if not adjusted properly, also come down with many tons of force and can be hazardous pinch points.

Ensure proper alignment of the punch and dies.

Cover foot pedals to prevent accidental cycling.

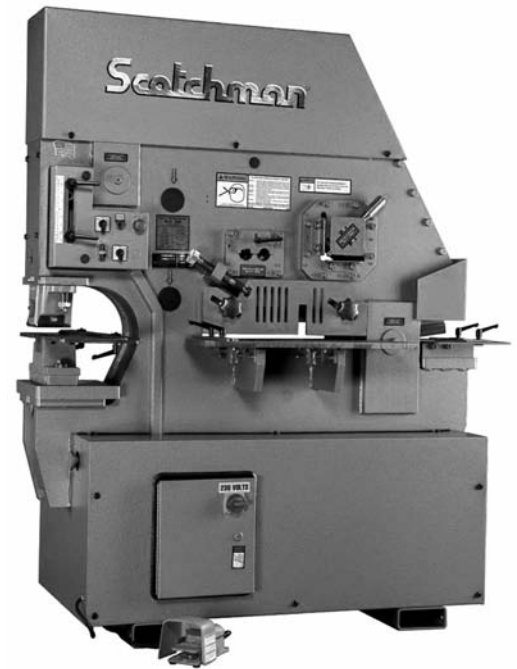
References

■ General Industry

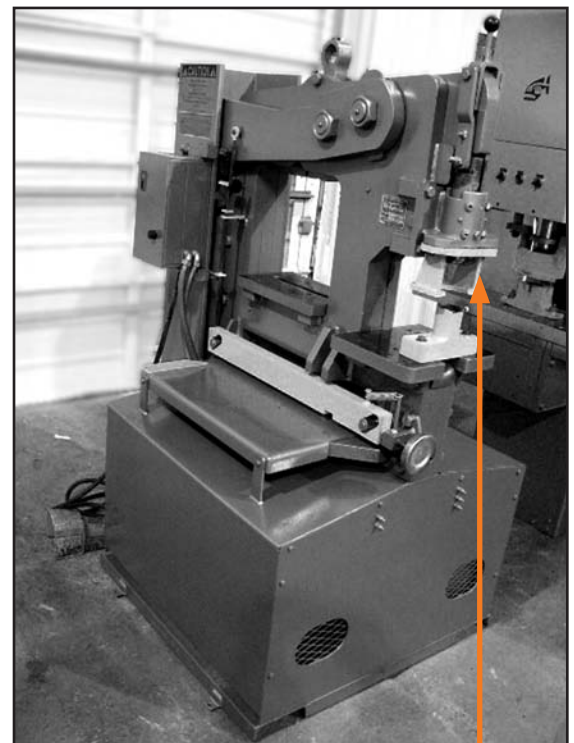
Oregon OSHA Division 2/Subdivision O 29 CFR 1910.212 — General Requirements for All Machines

Oregon OSHA Division 2/Subdivision J 29 CFR 1910.147 — The Control of Hazardous Energy (Lockout/Tagout)

■ ANSI B11.5 *Safety Requirements for the Construction, Care, and Use of Iron Workers*



Scotchman Industries, Inc.



“Strippers” are designed to hold the material down and may also provide some protection from the punch hazard.